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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 09/772,894      | 01/31/2001  | Junichi Akiyama      | 202594US2RD         | 1087             |

22850 7590 06/02/2003

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ALEXANDRIA, VA 22314

[REDACTED] EXAMINER

PSITOS, ARISTOTELIS M

| ART UNIT | PAPER NUMBER |
|----------|--------------|
|----------|--------------|

2653

DATE MAILED: 06/02/2003

12

Please find below and/or attached an Office communication concerning this application or proceeding.

|                              |                        |                     |
|------------------------------|------------------------|---------------------|
| <b>Office Action Summary</b> | <b>Application No.</b> | <b>Applicant(s)</b> |
|                              | 09/772,894             | AKIYAMA ET AL.      |
|                              | <b>Examiner</b>        | <b>Art Unit</b>     |
|                              | Aristotelis M Psitos   | 2653                |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on 09 April 2003.
- 2a) This action is FINAL.                  2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 1-8 and 10-19 is/are pending in the application.
- 4a) Of the above claim(s) 17-19 is/are withdrawn from consideration.
- 5) Claim(s) \_\_\_\_\_ is/are allowed.
- 6) Claim(s) 1-8 and 10-16 is/are rejected.
- 7) Claim(s) \_\_\_\_\_ is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) The proposed drawing correction filed on \_\_\_\_\_ is: a) approved b) disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) The oath or declaration is objected to by the Examiner.

#### Priority under 35 U.S.C. §§ 119 and 120

- 13) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All b) Some \* c) None of:
1. Certified copies of the priority documents have been received.
  2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) The translation of the foreign language provisional application has been received.
- 15) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

#### Attachment(s)

- 1) Notice of References Cited (PTO-892)                  4) Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_.
- 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)                  5) Notice of Informal Patent Application (PTO-152)
- 3) Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_.                  6) Other: \_\_\_\_\_

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## DETAILED ACTION

**Applicants' response of 4/9/03 has been considered with the following results.**

### ***Claim Rejections - 35 USC § 102***

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

### ***Claim Rejections - 35 USC § 103***

1. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
2. Claims 1-3,5-8 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chen et al considered with Kobayashi et al both considered with Peale et al –Majors, Jr. et al and all further considered with Ueyanagi.

The references are relied upon for the reasons stated in the previous Office action.

The orientation of the axis of the light spot is expanded upon/taught by the newly cited Ueyanagi reference; see the discussion with respect to 6b.

It would have been obvious to modify the references to Chen et al -Kobayashi et al – Peale et al- Majors, Jr. et al with the above teaching from Ueyanagi, motivation is to increase the recording track density across the record medium.

### ***Response to Arguments***

3. Applicant's arguments with respect to claims 1-3,5-8 and 10 have been considered but are moot in view of the new ground(s) of rejection.

Applicants' also argue that it would not have been obvious to use the teaching from Kobayashi et al and modify the Chen et al system because it would be unnecessary to incorporate the teachings from Kobayashi et al in the Chen et al system since the spot sizes are similar in dimension. The examiner considers the Kobayashi et al reference at col. 3 lines 63-65 (.2 x .6 microns) to be an example, i.e., one can reduce the size of the hole K to a desired dimension in order to increase the recording signal density. Although Chen et al uses the entire light beam to record the information, by reducing the spot size the result would yield an increase information signal density.

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With respect to the aperture orientation. The examiner concluded that the hole K (because of the difference in dimensions) had a major and minor axis (.2 x .6 microns). The question then arises, along what axis does the claimed W1 and W2 read?

✓ Ueyanagi discloses in this environment the additional ability of having a slit/aperture for permitting the light beam to finally emerge onto the record medium surface – see the above description of figure 6b for instance. Since the examiner concludes that those of ordinary skill in the art would want to maximize the amount of information on the record medium, the smallest width would be perpendicular to the track direction and the larger width along the track. Hence the examiner concludes that it would be obvious to rely upon the additional teaching from Ueyanagi and orient the aperture dimensions (major and minor axis) accordingly.

Peale and Majors were only relied upon for their teaching of the TE & TM mode or operations.

In order to reduce the issues, the examiner is no longer relying upon either Ueyanagi or Stovall et al stated in the previous OA.

4. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over the art as applied to claim 1 above, and further in view of the acknowledged prior art – see MPEP §2144.03 with respect to the use of Official notice.

The reasons stated in the previous OA are repeated.

No further rebuttal is necessary.

5. Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over the art as applied to claim 10 above, and further in view of the acknowledged prior art – see MPEP § 2144.03 with respect to the reliance upon Official notice.

The reasons stated in the previous OA are repeated.

No further rebuttal is necessary.

✓ 6. Claims 12, 13, 15 and 16 are rejected under 35 U.S.C. 102(e) as being anticipated by Stovall et al.

The reference is relied upon for the reasons stated in the previous OA.

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***Response to Arguments***

7. Applicant's arguments filed 4/9/03 have been fully considered but they are not persuasive. Applicants focus on the limitation that the radiating portion emitting the heat beam is in a receding position, while the tip of the magnetic pole protrudes between the heating source and the recording medium. The examiner concludes this is the case in Stovall et al, wherein the radiating portion (laser source) is as claimed – see figure 5 laser source is element 122, and the tip of the magnetic pole is element 96.

8. Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over the art as applied to claim 12 above, and further in view of Peale.

Peale is relied upon for the reasons stated in the previous OA.

***Conclusion***

Since applicants have not indicated a conflict between the present claims and those in copending application sn 09/749801, the examiner concludes that applicants have maintained a line of demarcation between the claims in this application and copending application 09/749801.

Any inquiries concerning missing papers/references, etc. must be directed to Group 2600 Customer Services at (703) 306-0377.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Aristotelis M Psitos whose telephone number is (703) 308-1598. The examiner can normally be reached on M-Thursday 8 - 4.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William R. Korzuch can be reached on (703) 305-6137. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9314 for regular communications and (703) 872-9314 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-4700.

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Aristotelis M Psitos  
Primary Examiner  
Art Unit 2653

*Off B*

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May 28, 2003